CLAIMS

What is claimed is:

1   1.   A browser plug-in comprising:

2   a Personal Content Tunnel (PCT) object processor to process a PCT object

3   (PCTO) returned by a content server in response to a request from a client, the PCTO

4   containing PCT information;

5   a PCT resolution module coupled to the PCT object processor to resolve a

6   service uniform resource identifier (URI) using the PCT information according to a

7   PCT resolution protocol, the service URI identifying a PCT resolution server; and

8   a server interface to receive a content URI and a PCT termination point resolved

9   by the PCT resolution server.

1   2.   The browser plug-in of claim 1 wherein the PCT information includes at

2   least one of a carrier type identifier, a PCT routing control parameter, a PCT session

3   time-out parameter, a bandwidth parameter, an authentication parameter, and the

4   service URI.

1   3.   The browser plug-in of claim 1 wherein the PCT object processor

2   comprises:

3   a PCT object receiver to receive the PCT object via a Hypertext Transfer

4   Protocol (HTTP) link; and

5   a PCT object interpreter to interpret the received PCT object .

1   4.   The browser plug-in of claim 3 wherein the PCT object interpreter

2   comprises:

3   a PCT object identifier to identify the PCT object based on a unique encoding

4   type.

1   5.   The browser plug-in of claim 4 wherein the unique encoding type is the

2   Multipurpose Internet Mail Extensions (MIME).

1   6.   The browser plug-in of claim 2 further comprising:

2   a session initiator to initiate a content delivery session between the client and a

3   local node using a carrier tunnel identified by the carrier type identifier, the local node

4   providing access to a content delivered from the content server.

1   7.   The browser plug-in of claim 6 wherein the local node is one of a first

2   local content host and a broadband service node, the first local content host caching the

3   content, the broadband service node connecting to one of a second local content host

4   caching the content and the content server via a content server tunnel.

1   8.   The browser plug-in of claim 7 wherein the carrier tunnel uses a

2   tunneling protocol, the tunneling protocol being one of a point-to-point protocol (PPP)/

3   layer two tunneling protocol (L2TP) and a PPP/ point-to-point tunneling protocol

4   (PPTP).

1   9.   The browser plug-in of claim 6 further comprises:

2   a routing controller to establish a route for the content delivery session between

3   the client and the subnet containing the Internet Protocol (IP) address of the content

4   server, the subnet being identified by a network mask in the PCT routing control

5   parameter.

1   10.   The browser plug-in of claim 2 further comprises:

2   an authenticator to authenticate the client using the authentication parameter,

3   the authentication parameter being one of a realm, a domain, a username, and a

4   password.

1   11.   A method comprising:

2   processing a PCT object (PCTO) returned by a content server in response to a

3   request from a client, the PCTO containing PCT information;

4   resolving a service uniform resource identifier (URI) using the PCT information

5   according to a PCT resolution protocol, the service URI identifying a PCT resolution

6   server; and

7   receiving a content URI and a PCT termination point resolved by the PCT

8   resolution server.

1   12.   The method of claim 11 wherein the PCT information includes at least
2 one of a carrier type identifier, a PCT routing control parameter, a PCT session time-
3 out parameter, a bandwidth parameter, an authentication parameter, and the service
4 URI.

1   13.   The method of claim 11 wherein processing the PCT object comprises:
2   receiving the PCT object via a Hypertext Transfer Protocol (HTTP) link; and
3   interpreting the received PCT object.

1   14.   The method of claim 13 wherein interpreting the received PCT object
2 comprises:
3   identifying the PCT object based on a unique encoding type.

1   15.   The method of claim 14 wherein the unique encoding type is the
2 Multipurpose Internet Mail Extensions (MIME).

1   16.   The method of claim 12 further comprising:
2   initiating a content delivery session between the client and a local node using a
3 carrier tunnel identified by the carrier type identifier, the local node providing access to
4 a content delivered from the content server.

1   17.   The method of claim 16 wherein the local node is one of a first local
2 content host and a broadband service node, the first local content host caching the
3 content, the broadband service node connecting to one of a second local content host
4 caching the content and the content server via a content server tunnel

1   18.   The method of claim 17 wherein the carrier tunnel uses a tunneling
2 protocol, the tunneling protocol being one of a point-to-point protocol (PPP)/ layer two
3 tunneling protocol (L2TP) and a PPP/ point-to-point tunneling protocol (PPTP).

1   19.   The method of claim 16 further comprises:
2   establishing a route for the content delivery session between the client and the
3 subnet containing the Internet Protocol (IP) address of the content server, the subnet
4 being identified by a network mask in the PCT routing control parameter.

20.   The method of claim 12 further comprises:

authenticating the client using the authentication parameter, the authentication parameter being one of a realm, a domain, a username, and a password.

21.   A computer program product comprising:

a machine useable medium having computer program code embedded therein, the computer program product having:

computer readable program code to process a PCT object (PCTO) returned by a content server in response to a request from a client, the PCTO containing PCT information;

computer readable program code to resolve a service uniform resource identifier (URI) using the PCT information according to a PCT resolution protocol, the service URI identifying a PCT resolution server; and

computer readable program code to receive a content URI and a PCT termination point resolved by the PCT resolution server.

22.   The computer program product of claim 21 wherein the PCT information includes at least one of a carrier type identifier, a PCT routing control parameter, a PCT session time-out parameter, a bandwidth parameter, an authentication parameter, and the service URI.

23.   The computer program product of claim 22 further comprising:

computer readable program code to initiate a content delivery session between the client and a local node using a carrier tunnel identified by the carrier type identifier, the local node providing access to a content delivered from the content server.

24.   The computer program product of claim 23 wherein the local node is one of a first local content host and a broadband service node, the first local content host caching the content, the broadband service node connecting to one of a second local content host caching the content and the content server via a content server tunnel

25.   The computer program product of claim 24 wherein the carrier tunnel uses a tunneling protocol, the tunneling protocol being one of a point-to-point protocol

3   (PPP)/ layer two tunneling protocol (L2TP) and a PPP/ point-to-point tunneling

4   protocol (PPTP).

1   26.   A system comprising:

2   a content server coupled to a network to provide a content;

3   a PCT resolution server coupled to the network to that resolves a service

4   uniform resource identifier (URI) using PCT information to a content uniform resource

5   identifier (URI) and a PCT termination point; and

6   a client coupled to a first broadband service node via a broadband medium, the

7   broadband service node coupling to the network, the client having a browser interfacing

8   to a browser plug-in, the browser plug-in comprising:

9   a Personal Content Tunnel (PCT) object processor to process a PCT

10   object (PCTO) returned by the content server in response to a client request

11   from the client, the PCTO containing PCT information,

12   a PCT resolution module coupled to the PCT object processor to resolve

13   a service uniform resource identifier (URI) using the PCT information

14   according to a PCT resolution protocol, the service URI identifying the PCT

15   resolution server, and

16   a server interface to receive the content URI and the PCT termination

17   point resolved by the PCT resolution server.

1   27.   The system of claim 26 wherein the PCT information includes at least

2   one of a carrier type identifier, a PCT routing control parameter, a PCT session time-

3   out parameter, a bandwidth parameter, an authentication parameter, and the service

4   URI.

1   28.   The system of claim 27 wherein the browser plug-in further comprising:

2   a session initiator to initiate a content delivery session between the client and a

3   local node using a carrier tunnel identified by the carrier type identifier, the local node

4   providing access to the content delivered from the content server.

1   29.   The system of claim 28 wherein the local node is one of a first local

2   content host and a second broadband service node, the first local content host caching

3   the content, the second broadband service node connecting to one of a second local

4   content host caching the content and the content server via a content server tunnel

1   30.   The system of claim 29 wherein the carrier tunnel uses a tunneling
2   protocol, the tunneling protocol being one of a point-to-point protocol (PPP)/ layer two
3   tunneling protocol (L2TP) and a PPP/ point-to-point tunneling protocol (PPTP).